We claim:

1. Method of controlling a laser in a WDM application, comprising the steps of, in the order given:

   (a) establishing a predetermined laser temperature;

   (b) controlling the laser current to give a wavelength of operation substantially equal to a desired wavelength, and

   (c) establishing a predetermined laser output power.

2. Method according to Claim 1, wherein step (c) is carried out by means of an attenuator situated at the laser output.

3. Method according to Claim 2, including prior to step (b) the step of setting the attenuator to a maximum attenuation setting and wherein step (c) comprises the step of reducing the attenuation setting to a desired level.

4. Method according to Claim 3, wherein the step of setting the attenuator to a maximum attenuation setting occurs during step (a).

5. Method according to Claim 3, wherein the attenuation is reduced gradually.

6. Method according to Claim 5, wherein reduction of attenuation starts while the operating wavelength is still converging towards its final value.

7. Method according to Claim 5, wherein during a laser shutdown procedure the attenuation is increased gradually.

8. Method according to Claim 5, wherein the attenuation is changed in ramp fashion.

9. Method according to Claim 1, wherein steps (a), (b) and (c) are performed using respective control loops.

10. Method according to Claim 9, wherein the control loops have different time responses.

11. Method according to Claim 10, wherein, of the control loops, the power-setting loop has the fastest response and the temperature-setting loop has the slowest response.

12. Method according Claim 9, wherein the control loops are digital control loops.

13. Method according to Claim 1, wherein step (b) includes the steps of setting the laser current to a value which will produce nominally the desired wavelength value, and adjusting the current via the relevant control loop to achieve substantially the actual desired wavelength value.

14. Method according to Claim 13, wherein the wavelength-monitoring process is carried out by two wavelength-monitoring means having maximum sensitivity at wavelengths respectively slightly greater than and less than the nominal operating wavelength.

15. Method according to Claim 14, wherein the wavelength-monitoring process is such that the operating wavelength corresponds to that wavelength which gives rise to equal output signals from the two wavelength-monitoring means.

16. Method according to Claim 1, wherein step (a) is performed only once when the laser equipment is initially powered up, the laser temperature being maintained constant while said equipment is in service.

17. Method of controlling a laser in a WDM application, wherein prior to a power-up or power-down operation on the laser an attenuation factor of an attenuator which is operative to attenuate the output power of the laser is set to a high value.

18. Method as claimed in Claim 17, wherein in a power-up routine, following the setting of the attenuation factor to a high value, the laser current is increased to a desired operating level and, when an operating wavelength of the laser has settled to a given value or has come to within a given tolerance of a given value, the attenuation factor is reduced to a normal working level.

19. Method according to Claim 18, wherein the attenuation is gradually reduced after the wavelength has settled to a final value.

20. Method according to Claim 17, wherein in a power-down routine, following the setting of the attenuation factor to a high value, the laser current is reduced to a substantially zero level.

21. Method according to Claim 1, wherein the laser is used in a DWDM application.

22. Method according to Claim 17, wherein the laser is used in a DWDM application.

23. Apparatus for controlling a laser in a WDM application, comprising a temperature-control loop for controlling the laser temperature, a wavelength-control loop for controlling an operating wavelength of the laser, a power-control loop for controlling the output power of the laser, and a control means for co-ordinating said control loops such as to establish desired values of the temperature, wavelength and power parameters in a given sequence.

24. Apparatus as claimed in Claim 23, wherein the control loops have different responses, the temperature-control loop having the slowest response and the power-control loop having the fastest response.

25. Apparatus as claimed in Claim 23, wherein the wavelength-control loop comprises a pair of wavelength monitors having maximum sensitivities respectively slightly greater than and less than a desired operating wavelength.

26. Apparatus as claimed in Claim 25, wherein the wavelength monitors are photodiodes.

27. Apparatus as claimed in Claim 23, wherein the temperature-control loop comprises a temperature sensor for monitoring laser temperature, the temperature sensor forming part of a Wheatstone bridge, the bridge being operative to provide a temperature-error signal to operate the temperature-control loop.

28. Apparatus as claimed in Claim 23, wherein the control means is configured to establish the following operational sequence: firstly, establishing of a desired laser temperature; secondly, establishing of a desired wavelength through control of laser current; thirdly, establishing of a desired laser output power.

29. Apparatus as claimed in Claim 23, wherein the control means is configured to ensure that, prior to a power-up or power-down operation on the laser, the output power of the laser is reduced to a low level.

30. Apparatus as claimed in Claim 23, wherein the power-control loop comprises an attenuator situated at an output of the laser.

31. Apparatus as claimed in Claim ~~23~~, wherein the laser is used in a DWDM application.